

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for attaching DNA in plasmid form to the surface of calcium phosphate ceramic or powder, ~~characterized in that it comprises~~ comprising a step a) consisting of a hydration of the calcium phosphate powder or calcium phosphate ceramic in a phosphate buffer solution not saturated with calcium and phosphate and a step b) consisting of an immersion of the products obtained in step a) in a phosphate buffer solution not saturated with calcium and phosphate containing a single- or double-stranded DNA for periods varying from a few minutes to several hours, c) producing calcium phosphate particles containing DNA molecules attached to its surface.
2. (Currently amended) The method as claimed in claim 1, ~~characterized in that~~ wherein the solution in step a) and b) comprises a 0.12 M phosphate buffer (pH 6.8).
3. (Currently amended) The method as claimed in claim 1, ~~characterized in that~~ wherein the immersion is carried out for at least 1, 5, 10 or 30 minutes up to about 12, 24 or 48 hours at a temperature ranging from 15 to 50°C, preferably about 37°C.
4. (Currently amended) The method as claimed in claim 1, ~~characterized in that~~ wherein the calcium phosphate particles are kept immersed in a culture medium of the cell culture media type.
5. (Currently amended) The method as claimed in claim 4, ~~characterized in that~~ wherein the calcium phosphate particles are immersed for about a few minutes to a few days.
6. (Currently amended) The method as claimed in ~~one of claims 4 and 5~~ claim 4, ~~characterized in that~~ wherein the calcium phosphate particles are immersed at a temperature ranging from 15 to 50°C, preferably about 37°C.

7. (Currently amended) The method as claimed in ~~one of claims 1 to 6~~ claim 1, ~~characterized in that~~ wherein step b) is carried out by means of a medium simulating the extracellular fluids or a medium of the cell culture media type containing the nucleic acids, said medium being nondenaturing for the DNA and not saturated with calcium and phosphate; this medium causing epitaxial carbonated apatite growth at the surface of said powders and ceramics.
8. (Currently amended) The method as claimed in ~~one of claims 1 and 7~~ claim 1, ~~characterized in that~~ wherein steps a) and b) are carried out simultaneously or successively.
9. (Currently amended) ~~The use of the~~ method as claimed in ~~one of claims 7 and 8~~ claim 7 to attach DNA under physiological pH conditions to calcium phosphate particles.
10. (Currently amended) A method for transfecting isolated cells, cultured in a monolayer or in three dimensions, ~~consisting of~~ comprising bringing the cells to be transfected into contact with the particles obtained by the method as claimed in ~~one of claims 1 to 8~~ claim 1 for periods of a few hours to a few weeks.
11. (Currently amended) A method for transfecting cells contained in a cultured tissue fragment consisting in bringing the cells to be transfected into contact with the particles obtained by the method as claimed in ~~one of claims 1 to 8~~ claim 1 for periods of a few hours to a few weeks.
12. (Currently amended) ~~The use of the particles obtained by the method as claimed in one of claims 1 to 8 for the preparation of~~ A method of preparing a medicament for transfecting in vivo cells contained in a tissue or in an organ utilizing the particles obtained by the method as claimed in claim 1.
13. (Currently amended) A calcium phosphate ceramic and powder which can be

obtained from the method as claimed in ~~one of claims 1 to 8, characterized in that it supports claim 1, wherein~~ characterized in that it supports epitaxial carbonated apatite growth at its the surface of the calcium phosphate ceramic and powder under nondenaturing conditions is supported.

14. (Currently amended) The calcium phosphate ceramic and powder as claimed in claim 13, additionally comprising nucleic acids attached to ~~its~~ the surface of the calcium phosphate ceramic and powder.

15. (Currently amended) The calcium phosphate ceramic and powder as claimed in claim 13 ~~and 14, characterized in that it possesses~~ having at least one of the following properties:

- nature of the charged groups at the surface: PO_4^- , OH^- , Ca^{++}
- basic surface pH
- negative electrokinetic potential
- hydrophobic
- particle size between 0-200 μm , in particular between 80-125 μm and 0-25 μm .

16. (Currently amended) The calcium phosphate ceramic and powder as claimed in ~~one of claims 13 to 15, characterized in that it additionally comprises~~ claim 13, comprising a core composed of another polymeric, ceramic or metallic, preferably magnetic, material.

17. (Currently amended) A particle formed based on the calcium phosphate powder as claimed in ~~one of claims 13 to 16~~ claim 13, contained in a mineral or polymeric matrix, in particular in calcium phosphate or sulfate cements.

18. (Currently amended) The ~~use of the~~ calcium phosphate powders and ceramics as claimed in ~~one of claims 13 to 16~~ claim 13, for the transfection of cells *in vitro*.

19. (Currently amended) The ~~use of the~~ calcium phosphate ceramic and powder as

claimed in ~~one of claims 13 to 16~~ claim 13, for the manufacture of a medicament for the transfection of cells *in vivo*.

20. (Currently amended) ~~The use of the~~ calcium phosphate ceramic and powder as ~~elaimed~~ in ~~one of claims 13 to 16~~ claim 13, for the culture of transfected cells in three dimensions with formation of a cellular or extracellular matrix aggregating the particles.